

## APPENDIX

James L. Kichline  
February 8, 1983

FOMC CHART SHOW -- INTRODUCTION

During our presentation this afternoon we will be referring to the package of charts distributed to you. The first chart displays the principal policy assumptions that underlie the staff's economic and financial forecast. For monetary policy, our working assumption is that M2 grows at 8 percent through the end of 1984 from a base period in the first quarter of this year. We are viewing that growth as an underlying rate that abstracts from the effects of possible shifts into MMDAs or Super NOW accounts from sources outside M2. For fiscal policy, we are assuming that the Congress essentially completed its actions on the fiscal year 1983 budget during the special congressional session late last year; the actions taken then have caused us to raise expected outlays by about \$7 billion compared with our previous forecast. The budget assumptions for fiscal year 1984 entail enactment of deficit reducing measures of around \$40 billion, a little less than proposed by the administration. For energy prices we are assuming that oil prices decline about 8 percent during 1983 and remain unchanged next year; that assumption provides a price of \$29 for a barrel of crude by the summer, or a decline of about \$2.00 from the level in the fourth quarter of last year.

The next chart provides additional detail on the federal budget. For both fiscal years 1983 and 1984 the staff is expecting actual deficits of around \$200 billion. These deficits are close to those estimated by the administration, although there are compositional differences; for example, we are assuming somewhat larger cuts in defense outlays and smaller cuts in nondefense programs. Nevertheless, the budget remains a stimulative force, as the structural deficits continue to rise this year and next.

The chart on the bottom shows outlays and receipts relative to GNP since the mid-60s. As can be seen, a large gap between the two has opened up given the sizable net tax cuts and smaller outlay cuts. The gap is, of course, influenced by cyclical forces, but policy actions have led to a situation where the gap won't close even in a good business environment.

This hasn't escaped the attention of financial market participants and undoubtedly is influencing interest rates, shown on the next chart. The staff's policy assumptions and GNP and financial forecast are associated with rates expected to remain near current levels, or drift lower over time as further progress on inflation generates a reduction of expected inflation. The M2 assumption in the forecast is premised upon trendless behavior of velocity for that aggregate, but in arriving at our forecast we implicitly have assumed that unexpected behavior of the aggregate is largely permitted to show through in measured aggregate growth and is not mainly transmitted to interest rates.

- 3 -

Mr. Zeisel will continue the presentation with a discussion of the GNP forecast.

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Joseph S. Zeisel  
February 8, 1983

CHART SHOW -- NONFINANCIAL DEVELOPMENTS

There have been persuasive signs recently that the economy is finally turning around. Although real GNP contracted in the fourth quarter, this was mainly the result of a massive inventory liquidation, while real final sales rose at a respectable  $3\frac{1}{2}$  percent rate.

As indicated in the upper left-hand panel of the next chart, a major factor in the fourth quarter pickup was the rise in consumer demand, with domestic auto sales leading the way. Sales of U.S. models have improved during the past three months in response to interest rate concessions, and with demand exceeding assemblies, units in dealers hands were reduced to under a 60-day supply. This is generally considered a comfortable stock level, and paved the way for an increase in production.

As the right-hand panel indicates, real retail sales outside of automotive markets also have shown improvement, with general merchandise, apparel, furniture and appliances picking up toward year-end. The steady gain in housing activity over the last year, shown in the lower left-hand panel, has undoubtedly also played a role in firming the market for consumer durables.

Finally, employment figures for January indicate an upturn in labor demand. Nonfarm payroll employment rose over

300,000 in January, after falling at an average rate of over 200,000 a month in the latter half of 1982. Part of this probably reflected difficulties with seasonal adjustment, particularly in retail trade; but employment in the cyclically sensitive manufacturing industries edged up as well and the factory work-week -- generally a good leading indicator -- rose strongly.

The next chart presents our view of the outlook for growth during the next two years. We are projecting a rise in real GNP of  $3\frac{1}{2}$  percent this quarter, largely reflecting the tapering off of inventory liquidation. But we expect growth in activity to be sustained at about this rate over the year and to accelerate gradually to about a  $4\frac{1}{2}$  percent rate in 1984. As the bottom panel indicates, this falls well short of the average performance in previous postwar expansions.

We expect the housing sector to continue to lend support to overall growth during the current year. As the top left panel of your next chart shows, the rebound in housing starts has been inversely correlated with the decline in mortgage interest rates, which by year-end had fallen by over 5 percentage points from the high in the autumn of 1981. Home buyers responded vigorously to the rate reductions, and in the fourth quarter sales of new and existing homes rose to their highest levels since the recession began. With unsold new home inventories low, the improvement in sales has been quickly translated into a rising level of new construction activity. The expected further reduction in mortgage

interest rates should help support the continued expansion in residential construction activity, and we are forecasting about a 1½ million rate of starts by the end of this year. We project a bit slower growth in outlays for housing next year with starts attaining about a 1-3/4 million rate by the fourth quarter.

As the next chart indicates, we are forecasting consumer spending to increase at a moderate pace this year. While a number of factors will be supporting growth in outlays including the scheduled 10 percent midyear tax cut, lower cost for consumer credit and reduced debt positions, incentives for saving will remain strong and income growth is projected to be quite modest. In 1984, the increase in consumption should be somewhat larger, reflecting the greater rise in income.

As reflected in the bottom panel, we anticipate that the saving rate will remain near its long-term average of about 6 percent through the projection period.

In contrast to household spending, the business sector -- presented in the next chart -- is likely to remain a drag on economic growth during most of the coming year. Low operating rates, depressed corporate profits and weak markets generally, suggest that businesses will continue to be extremely cautious in their investment plans, initially using existing plant and equipment more intensively to meet increased demand rather than investing in new capital. These attitudes are reflected in the results of recent plant and equipment spending surveys, which

indicate further declines in real spending this year. But as the upper left-hand panel indicates, there have been some signs of prospective improvement ahead. New orders for nondefense capital equipment have risen in recent months, narrowing the gap with shipments and improving the outlook for a turnaround in capital goods production.

In contrast, as shown in the right-hand panel, nonresidential construction activity turned down in the latter half of 1982 and near-term indicators suggest further declines in the months ahead. With vacancy rates for office buildings up sharply, this sector of construction seems certain to remain weak for some time.

On balance, we expect that business spending -- particularly for equipment -- should begin to benefit shortly after the economy perks up and corporate profit positions improve. This has been the pattern in past recoveries with the turn first evident in stronger demand for short lead-time products such as motor vehicles and office machinery. As shown in the bottom panel, we expect such an upturn in the latter part of this year and a strengthening of the rise in 1984.

The inventory situation and outlook is portrayed in the next chart. As noted earlier, stock liquidation played a major role in the contraction of activity at the end of last year. But recent data suggest the inventory adjustment will soon be drawing to a close. As the top left panel shows, dealers stocks of



domestic model cars were reduced to a historically low level by late in the year. In manufacturing, shown in the right-hand panel, the inventory total in real terms has been brought back down to prerecession levels. However, since sales have declined sharply as well, stock-sales ratios remain high in some sectors and we anticipate some additional overall liquidation in the next few months.

We are projecting an end to liquidation in real terms by the spring. But with the memory of recent stock imbalances still fresh, businesses are likely to maintain a cautious inventory policy and we expect a slight downtrend in the overall inventory-sales ratio through next year.

The next chart portrays the government components of spending. In order to avoid the distortions caused by the timing of CCC payments, the top three panels present annual average real dollar changes. As is evident, real defense spending rises substantially over the next two years. But this acceleration is partly offset by reduced nondefense purchases. At the state and local level, real purchases are expected to be essentially unchanged this year as a result of reduced federal support and weak tax revenues, but this situation should improve by 1984, as the cost of borrowing declines and tax receipts strengthen with activity and income. In total, government purchases rise about 1-3/4 percent in 1984 -- just a bit more than in the previous two years.

As the next chart shows, we expect the next two years to show the best employment rise since 1979. Nevertheless, the gains are comparatively small, especially this year -- reflecting the rather sluggish recovery anticipated and the fact that a pickup in demand will likely be accommodated first through an increase in the workweek and improved productivity.

Labor force growth is also likely to remain quite slow, given the limited improvement in employment opportunities and the relatively small rise in working age population. With employment growing only a bit faster than the labor force, the unemployment rate is expected to drop only slightly this year and to move to the  $9\frac{1}{2}$  percent range by the end of 1984.

As the next chart shows, the prolonged period of slack has brought a considerable easing of wage inflation. The effects were evident earlier in the hard-hit industrial sector, but over the past year or more, the wage rise has decelerated considerably in the service sector as well. The right-hand panel illustrates how union wages have moderated as a result of both smaller new wage settlements and reduced price inflation.

Overall, wage increases as measured by the index of average hourly earnings, rose at a  $5\frac{1}{2}$  percent rate in the second half of 1982 -- the slowest pace for a half-year period since 1972. We expect a further slowing over the next two years, although at a reduced pace. The factors making for some additional easing this year are already in place -- bargaining in an environment of

continued high unemployment and moderate inflation is certain to result in smaller wage increases than called for in expiring contracts -- many of which were negotiated in 1980. At the same time, concessions negotiated last year will continue to damp wage increases -- about an unusually large portion (one-third) of the workers covered by major contracts negotiated last year are not scheduled to receive wage increases at all this year.

Substantial slack and low rates of price inflation should continue to restrain wage increases in 1984, but with the economy firming, further slowing is likely to be small.

Total compensation costs are expected to moderate along with wages, but as indicated in the top panel of the next chart, the assumed speedup of the social security tax increase in early 1984 would tend to offset further improvement, raising hourly compensation by about one-half percent.

We do expect continued help from gains in productivity, however. Over the past year productivity growth -- at just under 2 percent -- has been surprisingly strong given the drop in production. Firms appear to have gone beyond their normal cyclical efforts to cut costs, and this could signal more lasting gains in efficiency. Productivity growth this year is expected to remain at a comparatively healthy  $2\frac{1}{2}$  percent annual rate as firms seek to hold down costs and rebuild profit margins. Then, as the recovery continues into 1984, productivity growth is expected to slow but still remain above our notion of its longer-

run trend. These productivity gains when combined with a slower rate of increase in hourly compensation should hold the rise in labor costs over the next two years to close to 3 percent.

The outlook for inflation is presented in the next chart. The emerging weakness in international oil markets is expected to damp the rise in energy prices this year, although the effects of the oil price drop will be offset somewhat by a further rise in prices of natural gas. And of course if the dollar depreciates as expected, import prices will no longer be falling.

As shown in the right-hand box, we project that food prices will rise a bit faster over the next two years. Although underlying labor cost trends should hold down processing costs, a variety of government efforts appear to be in train that are aimed at raising crop prices and boosting depressed farm incomes.

But fundamentally, the trend in overall prices will continue to reflect largely labor costs and relative slack in markets and as shown in the bottom panel, these should continue to be forces for moderating inflation; on balance, we project prices to be rising at slightly under a 4 percent rate over the next two years.

Mr. Truman will now discuss the international outlook.

Edwin M. Truman  
February 8, 1983

FOMC CHART SHOW -- INTERNATIONAL DEVELOPMENTS

The world economy has been experiencing a disinflationary process of unanticipated dimensions during the past three years -- in large measure as a result of policy actions here and abroad. The first international chart illustrates some of the feedback effects on the U.S. economy of that process.

As is shown in the upper left-hand panel, the weighted average foreign exchange value of the dollar rose by 45 percent from the third quarter of 1980 to last November -- propelled by U.S. macroeconomic policies and more recently by economic, financial and political uncertainties elsewhere in the world. Although the chart shows that the dollar declined in December and January from its November peak, it has recently retraced much of that decline.

The upper right-hand panel summarizes the extent of the recession in the other developed countries and the unprecedented stagnation in the non-OPEC developing countries. The latter countries have been forced to adjust their own policies rapidly in response to deflationary impulses from the industrial world and the reduced availability of external financing.

The lower panels illustrate some of the major consequences of these forces; U.S. exports declined by \$50 billion from early 1981 through the end of last year -- a decline of slightly more than 20 percent in both nominal and real terms. A significant portion of the decline has been in exports to developing countries and in exports of agricultural commodities and industrial supplies.

The next chart illustrates, in the upper left-hand panel, the substantial progress in the major foreign industrial countries in reducing inflation -- an average improvement of about 4 percentage points over two years, compared with more than 5 percentage points for the United States. On the other hand, as shown in the upper right-hand panel, industrial production abroad has declined significantly. There are signs in recent data on residential construction, new orders and consumer confidence that economic activity in some countries abroad is beginning to revive. As is shown in the lower panels, we are forecasting continued progress in reducing inflation in the foreign industrial countries in 1983, but a pick-up in real GNP this year and next that is markedly slower than in the United States.

As is illustrated in the next chart, we are forecasting that most of the decline in U.S. exports is behind us. By mid-year, the stirrings of recovery in the industrial countries should contribute to rising export demand. On the basis of the staff's forecast that the dollar will have declined significantly by midyear, relative price effects should provide a major boost to real exports by the end of 1983 and especially in 1984.

Service exports have contributed to the recorded declines in real GNP during the recession -- especially in the past two quarters. These exports, shown in the middle panel, now amount to 45 percent of real GNP exports of goods and services, and their revival, largely as a consequence of rising direct investment

receipts, should contribute to the overall rise shown in the bottom panel.

Turning to the import side, the next chart shows, in the top panel, the decline in the volume and price of our oil imports in 1982. This contributed to a \$16 billion drop in the value of such imports last year, thus helping to mask the deterioration in our competitive position. As already noted, we are assuming a further \$2 per barrel decline in the price of imported oil this year on top of the \$5 reduction since the peak in April 1981. However, rising demand should more than offset the effects of this further price decline on the value of U.S. oil imports.

Of course, our assumption about a decline in oil prices is one key area of uncertainty in the forecast. We believe we have adopted a reasonable assumption. The relative price of oil to oil-exporting and to other oil-importing countries is projected to fall significantly as the dollar depreciates. In this sense, a considerable further collapse in oil prices is built into our forecast.

Our outlook for non-oil imports, shown in the middle panel, is that the stagnation and recent decline in these imports should end this quarter. The upturn in non-oil imports is projected to be substantial, especially in value terms, contributing importantly to the rise in the trade deficit shown in the third line of the table at the bottom of the chart. We are projecting that the trade deficit will almost double this year and increase further

in 1984. Since we expect little net change in services and transfers, the widening of our trade deficit translates into a \$30 billion increase in our current account deficit this year to \$37 billion and a further increase next year.

As is shown in the upper panel in the next chart, the U.S. current account was already in deficit at about a \$20 billion annual rate in the second half of last year. Although the deficit is expected to reach an annual rate of \$57 billion in the first half of 1984, it should then begin to turn around given our forecast that the dollar will depreciate significantly this year, as is shown in the middle panel.

The projected depreciation of the dollar, while essential to restoring U.S. price competitiveness, raises questions about the implications for U.S. inflation. Such judgments are hazardous, not least because they rest on the generally inappropriate assumption that exchange rates are exogenous variables. Nevertheless, the bottom panel tries to quantify the effects on the U.S. price level of the dollar's appreciation since the third quarter of 1980 and the effect of its projected depreciation over the forecast period. We estimate that the cumulative impact of the dollar's appreciation on the U.S. price level was about 2-3/4 percent by the end of 1982. If the dollar were to remain at its level in the fourth quarter, the cumulative impact would increase to 4 percent by the end of 1984. If instead the dollar follows the course we have projected, we estimate that the projected depreciation combined with the previous appreciation would have essentially



a zero impact on the price level this year and a slight negative impact in 1984. The shaded area shows the differential effect of the two exchange rate paths.

While our projection is that the dollar will depreciate significantly in 1983 and that the depreciation will help to narrow the U.S. current account deficit by the end of 1984, questions have been raised about how our unprecedented current account deficits will be financed. The table on the next page tries to shed some light on this question.

The subtotal in line 5 of the table includes the current account and several relatively stable items in our international transactions. The circled figures on the right show an estimated \$36 billion swing in this subtotal between 1982 and 1983 -- not significantly different from the \$30 billion swing between 1976 and 1977 shown on the left. The recorded figures for net private capital flows in line 6 are rather stable. However, the continued relatively high level of real dollar interest rates might be expected to reduce the net outflow somewhat from that estimated for 1983 once the dollar is no longer expected to depreciate significantly further. The remaining gap would have to be covered in large part by an inflow of official capital -- line 7B. Two observations suggest that such a development might well be reasonable. First, the circled figures on the left show that the inflow of official capital increased by about \$20 billion between 1976 and 1977. This increase was more than accounted for by the exchange market

intervention of the major foreign industrial countries as the dollar began to depreciate. Second, the net inflows of official capital in the past two years have been small, as is shown by the circled figures on the right. In fact, the major foreign industrial countries have run down their direct official claims on the United States by about \$25 billion as part of their \$70 billion in net intervention sales of dollars during the past two years. Thus, these countries would seem to have substantial scope to replenish their reserves.

I would emphasize that this analysis is highly conjectural, especially given the large flows involved, the many known potential channels, and the size of the uncertainties that are buried in the statistical discrepancy in line 4.

Mr. Prell will now review the domestic financial outlook.

Michael J. Prell  
February 8, 1983

FOMC CHART SHOW -- FINANCIAL DEVELOPMENTS

My first chart provides an aggregative view of credit flows. As indicated in the top panel, the expansion of domestic nonfinancial sector debt moderated slightly last year while nominal GNP was decelerating sharply. Such a relative movement in debt and GNP is typical of recessions -- though a divergence of this magnitude has not occurred since the 1950s. We are projecting a narrowing of the gap between credit and GNP growth, but in past upturns GNP growth usually has outstripped credit growth.

The projected recovery of course departs from past norms in a number of ways, but one factor that bears directly on the credit outlook is ballooning federal cash needs. Not only will the Treasury be borrowing large amounts in absolute terms, but -- as the lower panel shows -- we are projecting an extraordinary share of total credit to be absorbed by the federal government. To be sure, the low level of economic activity is one reason for this, but as Mr. Kichline noted, we are also anticipating a widening of the structural deficit through 1984.

Turning to the next chart, we can see at the upper left where some of the large volume of financial assets created in the past year went. The growth of household financial assets -- shown here scaled by disposable income -- has far outstripped

that of household debt since 1979. As surveys have indicated, in the right panel, households have had little taste for drawing down savings to finance outlays and the same has been true with regard to borrowing -- at least until just recently when cut-rate auto loans may have changed some attitudes.

The lower left panel shows that the general caution of households -- coupled with tighter lending terms -- has held down consumer loan delinquencies. In the case of mortgage loans, however, longer maturities have not permitted such a smooth adjustment, and with long-term joblessness spreading, mortgage delinquencies have risen sharply -- and may continue rising.

The business sector is just beginning the process of restoring its financial strength. As may be seen in the upper panel of the next chart, inventory liquidation and cutbacks in fixed investment have narrowed the gap between outlays and internal funds. In the fourth quarter, we estimate that the financing gap disappeared. In our forecast, however, firms will not experience the excess of cash flow over expenditures that has occurred early in other upturns, and thus the improvement of corporate finances that is needed to regain higher debt ratings and otherwise achieve a more solid basis for future expansion will be more difficult. Moreover, the decline in interest rates we've experienced and the prospective increases in profits point to only a slight decline in the ratio of interest payments to corporate income. And, as suggested in the bottom panel, though

we expect that companies will continue their recent pattern of greater reliance on long-term capital, such measures of business liquidity as the ratio of short-term to total debt are not projected to reverse their long-run trends of deterioration.

The next chart deals with the state and local sector, which, as the upper left panel shows, last year experienced a noticeable budget deficit, net of retirement funds. Moreover, a number of states have largely depleted their cash reserves. Through further spending cuts and tax increases, and with the aid of economic recovery, we expect to see state and local governments close the budget gap in 1983 and move into surplus in 1984.

For many units that need to borrow, lowered credit ratings impose increased costs. The upper-right panel shows the effect of downgradings on the credit standing of state governments; the number with Aaa ratings has dropped markedly. But even for those units retaining high ratings, borrowing costs are substantial. As the lower-left panel shows, tax-exempt debt is carrying yields approaching those on Treasury bonds. This is largely because the key traditional institutional investors -- banks and casualty insurers -- have had little appetite for tax-exempt income in the past couple of years. Despite the high rates, though, as shown in the right-hand panel, tax-exempt bond issuance has soared, reflecting the increasing use of the market by private businesses and by municipally sponsored enterprises in

power generation, hospitals, housing, and other areas. States and localities have, in effect, become enormous financial intermediaries. They may become even more important in that role in the months ahead as they sell debt for the purpose of eventually repaying higher cost obligations but in the meantime invest the proceeds in Treasury obligations.

The next chart focuses on some better recognized intermediaries -- banks and thrift institutions. The top panel shows that bank earnings have been trending downward since 1979. Moreover, as indicated in the middle panel, there is now an ominous upswing in loan loss provisions and charge-offs and the fourth quarter probably was marked by a substantial further rise. In the near term, the competition for MMDAs is hurting bank earnings a bit, and it is difficult to say how soon rates will settle to sustainable levels. But the problem of loan quality probably looms as a far bigger potential depressant on the earnings of many banks and may have some effect on the new loan exposures banks are willing to take on.

At the thrift institutions, in the bottom panel, the decline in interest rates may have eliminated operating losses, even with the recent MMDA-related boost to deposit costs. Assuming MMDA competition continues to simmer down, our interest rate projection implies a small profit for thrift institutions in 1983. Thrift liquidity is high now -- at least in terms of asset composition -- and we are anticipating that deposit flows will be

adequate to encourage them to be somewhat stronger participants in home mortgage finance in the months ahead.

Mr. Kichline will now conclude the presentation.

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James L. Kichline  
February 8, 1983

FOMC CHART SHOW -- CONCLUSION

The chart in the last section of the materials provides a summary of the forecasts of FOMC members, along with those of the staff and the administration. FOMC members generally tended to have a little higher forecast for nominal and real GNP, as well as for the GNP deflator, compared with the staff; the administration's forecast tends to be a bit lower on real GNP and higher on prices compared with both the FOMC members and staff forecasts. Overall, however, the differences appear to be rather small. In addition, the FOMC member forecasts tend to be fairly tightly clustered; for example, two-thirds of all forecasts on real GNP measured fourth quarter to fourth quarter fall within the range of  $3\frac{1}{2}$  to  $4\frac{1}{2}$  percent.

That completes our presentation.

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